

BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF HAWAII

In the Matter of the Application of)

HAWAIIAN ELECTRIC COMPANY, INC. )

DOCKET NO. 04-0051

For Approval to Commit Funds )  
in Excess of \$500,000 for )  
Item P0000454, Installation of the )  
Kahe 6 Fan Enclosure. )  
\_\_\_\_\_ )

DECISION AND ORDER NO. 21124

Filed July 19, 2004  
At 2 o'clock P.M.

Karen Higashi  
Chief Clerk of the Commission

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DIV. OF CONSUMER ADVOCACY  
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STATE OF HAWAII

ATTEST: A True Copy  
KAREN HIGASHI  
Chief Clerk, Public Utilities  
Commission, State of Hawaii.

K. Higashi

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DECISION AND ORDER

I.

Application

HAWAIIAN ELECTRIC COMPANY, INC. ("HECO") filed an application on March 9, 2004, and revised it on May 18, 2004, requesting commission approval to commit approximately \$695,715 for Item P0000454,<sup>1</sup> Installation of the Kahe 6 Fan Enclosure ("Proposed Project"). HECO's request is made pursuant to paragraph 2.3.g.2 of the commission's General Order No. 7, Standards for Electric Utility Service in the State of Hawaii ("G.O. No. 7").

HECO served copies of the application on the DIVISION OF CONSUMER ADVOCACY, DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS ("Consumer Advocate"). On March 31, 2004, the Consumer Advocate filed a preliminary statement of position. On April 27, 2004, the

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<sup>1</sup>On May 18, 2004, HECO submitted a revised Application Exhibit III, page 1, which contained a revision in its estimated Outside Services costs, from \$310,000 to \$230,000. The result was that the total estimated cost of the Proposed Project was revised from approximately \$775,715 to approximately \$695,715.

Consumer Advocate issued information requests ("IRs") to HECO. HECO responded to these IRs on June 3, 2004 and June 21, 2004.<sup>2</sup>

HECO filed a letter on June 2, 2004 requesting an extension of the G.O. No. 7 section 2.3.g.2 requirement that the commission "render a decision within 90 days of filing by the utility" ("90-day Period"), until August 6, 2004.<sup>3</sup> Order No. 21030, filed on June 4, 2004, granted HECO's request for an extension of the 90-day Period, to August 6, 2004.

On June 24, 2004, the Consumer Advocate submitted its statement of position ("SOP") in this matter in which it stated that it did not object to the commission's approval of the instant application.

## II.

### Background

The Kahe Unit 6, in operation since 1981, is a nominal 135 megawatts, base loaded, reheat unit. The boiler for the Kahe Unit 6 produces approximately 918,000 pounds per hour of superheated steam, which is used to rotate a steam turbine generator to produce electricity.<sup>4</sup> Air is supplied to the boiler by a forced draft system. The boiler has two (2) forced draft fans.

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<sup>2</sup>HECO's June 21, 2004 response was a confidential submission pursuant to Protective Order No. 21060, filed on June 17, 2004, in the instant application.

<sup>3</sup>Pursuant to G.O. No. 7 section 2.3.g.2, the 90<sup>th</sup> day from the filing of the instant application is June 7, 2004.

<sup>4</sup>See Application at 2.

HECO states that the manufacturer's specification for the noise level from each fan is approximately 127 decibels and that the combined noise level of both fans is approximately 130 decibels.<sup>5</sup> Hawaii Occupational Safety and Health ("HIOSH") regulations provide that administrative or engineering controls be set in place if sound levels exceed 90 decibels over an eight (8) hour time-weighted average.<sup>6</sup> In compliance with this regulation, a fan enclosure surrounds the fan units to reduce the noise levels generated by the fans.

The fan enclosure was installed with the fan unit in 1981. Over the years, the fan enclosure has become corroded, compromising the structural integrity of the enclosure. For instance, sound from the fans leaks through the cracks and holes that have been created over time by corrosion in the enclosure walls, and HECO notes that the disintegration poses very real safety risks from continued use, with the possibility of the structure's collapse.<sup>7</sup>

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<sup>5</sup>Id. at 3.

<sup>6</sup>See Exhibit 1 to the Application. The Code of Federal Regulations ("CFR"), § 1910.95, as amended, entitled "Occupational noise exposure", is made a part of Hawaii Administrative Rules § 12-200.1. CFR § 1910.95(a) reads, in relevant part, that "[p]rotection against the effects of noise exposure shall be provided when the sound levels exceed those shown in Table G-16...". CFR § 1910.95(b) further provides that "[w]hen employees are subjected to sound exceeding those listed in Table G-16, feasible administrative or engineering controls shall be utilized." As noted above, in accordance with Table G-16, sound levels cannot exceed 90 decibels for an eight (8) hour time-weighted average.

<sup>7</sup>See Application at 3.

HECO proposes to replace the existing fan enclosure with a new enclosure on a steel frame, with stainless steel inner and outer faces to reduce corrosion.<sup>8</sup> HECO states that the new enclosure will be designed to reduce fan noise by approximately 40 decibels.<sup>9</sup>

The Proposed Project is set to correspond with the planned Kahe Unit 6 overhaul scheduled for January 2005. Thus, based on a five month lead time for ordering materials, HECO will need to commit funds for purchase orders in June 2004.<sup>10</sup>

HECO considered not replacing the fan enclosure. This option was rejected due to concerns about the safety of the structure, as noted above. HECO also considered repairing the existing fan enclosure, but due to the extensive amount of corrosion, this option was considered impractical. Finally, HECO considered reducing the noise with the addition of certain technology, e.g., silencers, but determined that such technology would not provide adequate noise reduction.<sup>11</sup>

### III.

#### Consumer Advocate

The Consumer Advocate does not object to the commission's approval of the Proposed Project. Upon reviewing

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<sup>8</sup>Id. at 4.

<sup>9</sup>Id.

<sup>10</sup>Id.

<sup>11</sup>HECO also notes that silencers restrict air flow, thereby reducing the forced draft fan's efficiency. See Application at 5.

HECO's application, the Consumer Advocate concludes that the condition of the fan enclosure has deteriorated to the point where it must be repaired if the fan enclosure is to protect the enclosed fans and serve its proper function of reducing noise levels from the fans. A new fan enclosure will also protect the fans from weather-related forces, such as rainwater. The Consumer Advocate also states that costs for the Proposed Project are reasonable, based upon information provided by HECO in the instant application. Additionally, the Consumer Advocate acknowledges that any concerns it may have regarding the reasonableness of costs for the Proposed Project may be pursued, if necessary, after HECO submits its final cost report at completion of the Proposed Project.

#### IV.

##### Findings and Conclusions

Upon a careful review of HECO's application, including its responses to the Consumer Advocate's IRs, and the Consumer Advocate's SOP, we find the Proposed Project to be reasonable and in the public interest. The Proposed Project will allow HECO the continued use of Kahe Unit 6 to supply energy to HECO's system, while meeting the HIOSH noise restriction.<sup>12</sup> Simply repairing the existing structure, rather than replacing the existing fan enclosure is not a reasonable option. The existing fan enclosure is in such a corroded condition, that any attempt short of a total

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<sup>12</sup>We note, also, that the Proposed Project is consistent with HECO's Integrated Resource Planning Framework which assumes that HECO's existing generating units, including Kahe Unit 6, will continue to supply reliable energy to HECO's system. See Application at 6.

replacement of the fan enclosure would be inadequate over the long term. Other technologies have also not proven to be adequate methods of noise reduction. We, thus, conclude that HECO's application to commit funds for Item P0000454, Installation of the Kahe Unit 6 Fan Enclosure, should be approved.

V.

Orders


THE COMMISSION ORDERS:


1. HECO's application, filed on March 9, 2004, to commit an estimated \$695,715 for Item P0000454, Installation of the Kahe 6 Fan Enclosure, in accordance with section 2.3.g.2 of G.O. No. 7, is approved; provided that no part of the cost of the Proposed Project may be included in HECO's rate base unless and until the Proposed Project has been completed, and the Proposed Project is used and useful for utility purposes.

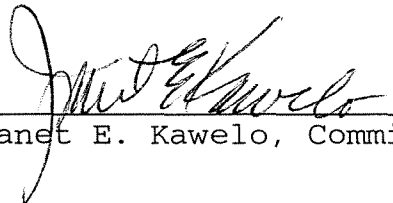
2. HECO shall submit a report within 60 days of the completion of the Proposed Project, with an explanation of any deviation of 10 per cent or more in the Proposed Project's cost from that estimated in the application. Failure to submit the report, as requested by this decision and order, will constitute cause to limit the cost of the project, for ratemaking purposes, to that estimated in the instant application.

DONE at Honolulu, Hawaii this 19th day of July, 2004.

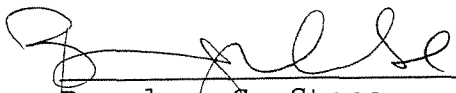
PUBLIC UTILITIES COMMISSION  
OF THE STATE OF HAWAII

By   
Carlito P. Caliboso, Chairman

By   
Wayne H. Kimura, Commissioner

By   
Janet E. Kawelo, Commissioner

APPROVED AS TO FORM:

  
Benedyne S. Stone  
Commission Counsel

04-0051.cs



CERTIFICATE OF SERVICE

I hereby certify that I have this date served a copy of the foregoing Decision and Order No. 21124 upon the following parties, by causing a copy hereof to be mailed, postage prepaid, and properly addressed to each such party.

DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS  
DIVISION OF CONSUMER ADVOCACY  
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Karen Higashi

DATED: July 19, 2004